

Remarks

Claims 1-20 are pending in the application. Claims 1-3, 13-15 and 18-20 are rejected, while claims 4-12, 16 and 17 are objected to. Based on the following, reconsideration of the claim rejections is requested.

Claim Rejections—35 U.S.C. § 102

The Examiner rejected claims 1, 2, 13, 14, 18 and 19 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0180266 (Hara et al.). The Examiner states that Hara et al. disclosed a method for controlling regenerative braking that includes “determining a first vehicle condition, such as vehicle deceleration (see paragraph 0070) when the vehicle is braking; determining a first predetermined value, such as vehicle the wheel slip amounts S_{la} , SL_b threshold values, calculated by the brake control device 52 (see paragraphs 0034, 0035) corresponding to the first vehicle condition.” Applicants respectfully disagree with the Examiner’s interpretation of Hara et al. as applied to the pending claims.

With regard to the first vehicle condition, referenced by the Examiner as “vehicle deceleration”, and citing to Paragraph 0070, Applicants note the following. Paragraph 0070 discusses the use of a “target deceleration G_{st} ”, a “target deceleration G_{pt} ”, and a “final target deceleration G_t ”. The values for these target decelerations are based on different vehicle parameters. For example, the target deceleration G_{st} is “based on the depression stroke S_p of the brake pedal 32.” Similarly, the target deceleration G_{pt} is “based on the master cylinder pressure P_m ,” while the final target deceleration G_t is “calculated as a weighted sum of the target deceleration G_{pt} and the target deceleration G_{st} .” (Paragraph 0070.) Therefore, according to Hara et al., and in particular the express passage cited by the Examiner, one of the target decelerations is based on a pedal position, a second of the target decelerations is based on a master cylinder pressure, and the final target deceleration is a mathematical combination of the first two. The Examiner is not clear as to which of these decelerations is being considered the first vehicle condition; however, Applicants will address each in turn.

As noted above, the Examiner considers the step of “determining a first predetermined value” as being disclosed in Hara et al. by the determination of “wheel slip amounts S_{La} [and] S_{Lb} .” The Examiner references Paragraphs 0034 and 0035 of Hara et al. in support of this position. Although it is true that these passages of Hara et al. discuss the use of wheel slip reference values S_{La} and S_{Lb} as parameters for starting an anti-skid control (ABS control), there is not an express or even inherent disclosure as to how these values “correspond to the first vehicle condition” as stated by the Examiner. This is because there is no correspondence between the target decelerations identified by the Examiner as a first vehicle condition and the threshold values of the wheel slip reference values identified by the Examiner as a first predetermined value.

As discussed above, the value of G_{st} is based on a brake pedal position, the value of G_{pt} is based on a master cylinder pressure, and the value of G_t is a weighted sum of the two. There is no express or inherent correspondence between a brake pedal position, or a master cylinder pressure, and a target value of a wheel slip. Even if the “first predetermined value” is taken to be the wheel slip itself, rather than the target value, the amount of slip a wheel experiences is based on, for example, the coefficient of friction between the tires and the road surface.

Claim 1 of the present application recites a method that includes the step of “determining a first predetermined value corresponding to the first vehicle condition.” Claim 18 recites a vehicle that includes a controller that is configured “to determine a first predetermined value corresponding to the first vehicle condition.” Similarly, claim 13 recites a method that includes the step of “determining a first vehicle condition when the vehicle is braking, the first vehicle condition defining a first predetermined value.” As described in Hara et al., the three values of target deceleration are based on brake pedal position, master cylinder pressure, or a combination of the two. A target value of the wheel slip does not “correspond” to any of these as expressly required by claims 1 and 18, nor do any of these target decelerations “define” the target wheel slip values as expressly required by claim 13.

The MPEP requires for anticipation that each and every element of a claim be found, either expressly or inherently described, in a single prior art reference. It also requires that “[t]he identical invention must be shown in as complete detail as is contained in the . . .

claim.” (MPEP 2131, citations omitted.) As discussed above, each of the independent claims 1, 13 and 18 contain elements that are neither expressly nor inherently described in Hara et al., and Applicants submit that the Examiner has not met the strict requirements for establishing a *prima facie* case of anticipation.

Claim 2 depends directly from claim 1, claim 14 depends directly from claim 13, and claim 19 depends directly from claim 18. Each of these dependent claims contains all of the elements of its respective base claim, as well as additional elements that further distinguish it from the cited reference. Therefore, for at least the reasons discussed above, each of these dependent claims is believed to be allowable.

Claim Rejections—35 U.S.C. § 103

The Examiner rejected claims 3, 15 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Hara et al. Claim 3 depends directly from claim 1, claim 15 depends directly from claim 13, and claim 20 depends directly from claim 18. Each of these dependent claims contains all of the limitations of its respective base claim, and additional limitations that further distinguish it from the cited reference. Therefore, for at least the reasons discussed above, Applicants submit that these dependent claims are also patentable over Hara et al.

Allowable Subject Matter

The Examiner objected to claims 4-12, 16 and 17 as being dependent upon a rejected base claim, but indicated that each would be allowable if rewritten in independent form to include all of the limitations of its respective base claim and any intervening claims. As discussed in detail above, the base claims for each of these dependent claims is believed to be allowable, and Applicants respectfully request the objections to be withdrawn.

Based on the foregoing, Applicants request allowance of each of the pending claims. Please charge any fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 06-1510.

Respectfully submitted,

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